

SEQUENCE LISTING

<110> Small, Kersten
Liggett, Stephen
<120> Alpha-2A-Adrenergic Receptor Polymorphisms
<130> 10738-44
<140> 09/636,259
<141> 2000-08-10
<160> 26
<170> PatentIn version 3.1
<210> 1
<211> 1350
<212> DNA
<213> Homo sapiens

RECEIVED
TECH OFFICE 1500/2900
03 MAR -6 PM 1:18

<400> 1
atgggctccc tgcagccgga cgcgggcaac gcgagctgga acgggaccga ggcgccgggg 60
ggcggcgccc gggccacccc ttactccctg caggtgacgc tgacgctggt gtgcctggcc 120
ggcctgctca tgctgctcac cgtgttcggc aacgtgctcg tcatcatcgc cgtgttcacg 180
agccgcgcgc tcaaggcgcc ccaaaacctc ttcctggtgt ctctggcctc ggccgacatc 240
D' ctggtggcca cgctcgatcat ccctttctcg ctggccaacg aggtcatggg ctactggtac 300
ttcggcaagg cttggtgcga gatctacctg gcgctcgacg tgctcttctg cacgtcgtcc 360
atcgtgcacc tgtgcgccat cagcctggac cgctactggt ccatcacaca ggccatcgag 420
tacaacctga agcgcacgcc gcgccgcac aaggccatca tcatcaccgt gtgggtcatc 480
tcggccgtca tctccttccc gccgctcatc tccatcgaga agaagggcgg cggcggcggc 540
ccgcagccgg ccgagccgcg ctgcgagatc aacgaccaga agtggtacgt catctcgtcg 600
tgcatcggct cttcttctcg tccctgcctc atcatgatcc tggctctacgt gcgcatctac 660
cagatcgcca agcgtcgcac ccgcgtgcca cccagccgcc ggggtccgga cgccgtcgcc 720
gcgccgccgg ggggcaccga gcgcaggccc aacggtctgg gccccgagcg cagcgcgggc 780
ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc 840
gcgccggccg ggccgcgcga caccgacgcg ctggacctgg aggagagctc gtcttccgac 900
cacgccgagc ggcctccagg gccccgcaga cccgagcgcg gtccccgggg caaaggcaag 960
gccccgagcg gccaggtgaa gccgggcgac agcctgccgc ggcgcggggc gggggcgacg 1020
gggatcggga cgccggctgc agggccgggg gaggagcgcg tcggggctgc caaggcgtcg 1080
cgctggcgcg ggcggcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtggtcatc 1140
ggagtgttcg tgggtgtgctg gttccccttc ttcttcacct acacgctcac ggccgtcggg 1200
tgctccgtgc cacgcacgct cttcaaattc ttcttctggt tcggctactg caacagctcg 1260
ttgaaccggg tcatctacac catcttcaac cacgatttcc gccgcgcctt caagaagatc 1320
ctctgtcggg gggacaggaa gcggatcgtg 1350

<210> 2

<211> 1350
<212> DNA
<213> Homo sapiens

<400> 2
atgggctccc tgcagccgga cgcgggcaac gcgagctgga acgggaccga ggcgccgggg 60
ggcggcgccc gggccacccc ttactccctg caggtgacgc tgacgctggt gtgcctggcc 120
ggcctgctca tgctgctcac cgtgttcggc aacgtgctcg tcatcatcgc cgtgttcacg 180
agccgcgcgc tcaaggcgcc ccaaaacctc ttcctggtgt ctctggcctc ggccgacatc 240
ctggtggcca cgctcgatcat ccctttctcg ctggccaacg aggtcatggg ctactggtac 300
ttcggcaagg cttggtgcga gatctacctg gcgctcgacg tgctcttctg cacgtcgtcc 360
atcgtgcacc tgtgcgccat cagcctggac cgctactggt ccatcacaca ggccatcgag 420
tacaacctga agcgcacgcc gcgccgcac aaggccatca tcatcaccgt gtgggtcatc 480
tcggccgtca tctccttccc gccgctcatc tccatcgaga agaagggcgg cggcggcggc 540
ccgcagccgg ccgagccgcg ctgcgagatc aacgaccaga agtggtacgt catctcgtcg 600
tgcatcggct ccttcttcgc tccctgcctc atcatgatcc tggcttacgt gcgcatctac 660
cagatcgcca agcgtcgcac ccgcgtgcca cccagccgcc ggggtccgga cgccgtcgcc 720
gcgccgccgg ggggcaccga gcgcaggccc aagggtctgg gccccgagcg cagcgcgggc 780
ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc 840
gcgccggccg ggccgcgcga caccgacgcg ctggacctgg aggagagctc gtcttccgac 900
cacgccgagc ggcctccagg gccccgcaga cccgagcgcg gtccccgggg caaaggcaag 960
gccccgagcg gccaggtgaa gccgggcgac agcctgccgc ggcgcggggc gggggcgacg 1020
gggatcggga cgccggctgc agggccgggg gaggagcgcg tcggggctgc caaggcgtcg 1080
cgctggcgcg ggcggcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtggtcatc 1140
ggagtgttcg tgggtgtgctg gttccccttc ttcttcacct acacgctcac ggccgtcggg 1200
tgctccgtgc cacgcacgct cttcaaattc ttcttctggt tcggctactg caacagctcg 1260
ttgaaccggt tcatctacac catcttcaac cacgatttcc gccgcgcctt caagaagatc 1320
ctctgtcggg gggacaggaa gcggatcgtg 1350

<210> 3
<211> 450
<212> PRT
<213> Homo sapiens

<400> 3
Met Gly Ser Leu Gln Pro Asp Ala Gly Asn Ala Ser Trp Asn Gly Thr
1 5 10 15
Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
20 25 30
Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
35 40 45

| | | | | | | | | | | | | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Phe | Gly ₅₀ | Asn | Val | Leu | Val | Ile ₅₅ | Ile | Ala | Val | Phe | Thr ₆₀ | Ser | Arg | Ala | Leu |
| Lys ₆₅ | Ala | Pro | Gln | Asn | Leu ₇₀ | Phe | Leu | Val | Ser | Leu ₇₅ | Ala | Ser | Ala | Asp | Ile ₈₀ |
| Leu | Val | Ala | Thr | Leu ₈₅ | Val | Ile | Pro | Phe | Ser ₉₀ | Leu | Ala | Asn | Glu | Val ₉₅ | Met |
| Gly | Tyr | Trp | Tyr ₁₀₀ | Phe | Gly | Lys | Ala | Trp ₁₀₅ | Cys | Glu | Ile | Tyr | Leu ₁₁₀ | Ala | Leu |
| Asp | Val | Leu ₁₁₅ | Phe | Cys | Thr | Ser | Ser ₁₂₀ | Ile | Val | His | Leu | Cys ₁₂₅ | Ala | Ile | Ser |
| Leu | Asp ₁₃₀ | Arg | Tyr | Trp | Ser | Ile ₁₃₅ | Thr | Gln | Ala | Ile | Glu ₁₄₀ | Tyr | Asn | Leu | Lys |
| Arg ₁₄₅ | Thr | Pro | Arg | Arg | Ile ₁₅₀ | Lys | Ala | Ile | Ile | Ile ₁₅₅ | Thr | Val | Trp | Val | Ile ₁₆₀ |
| Ser | Ala | Val | Ile | Ser ₁₆₅ | Phe | Pro | Pro | Leu | Ile ₁₇₀ | Ser | Ile | Glu | Lys | Lys ₁₇₅ | Gly |
| Gly | Gly | Gly | Gly ₁₈₀ | Pro | Gln | Pro | Ala | Glu ₁₈₅ | Pro | Arg | Cys | Glu | Ile ₁₉₀ | Asn | Asp |
| Gln | Lys | Trp ₁₉₅ | Tyr | Val | Ile | Ser | Ser ₂₀₀ | Cys | Ile | Gly | Ser | Phe ₂₀₅ | Phe | Ala | Pro |
| Cys | Leu ₂₁₀ | Ile | Met | Ile | Leu | Val ₂₁₅ | Tyr | Val | Arg | Ile | Tyr ₂₂₀ | Gln | Ile | Ala | Lys |
| Arg ₂₂₅ | Arg | Thr | Arg | Val | Pro ₂₃₀ | Pro | Ser | Arg | Arg | Gly ₂₃₅ | Pro | Asp | Ala | Val | Ala ₂₄₀ |
| Ala | Pro | Pro | Gly | Gly ₂₄₅ | Thr | Glu | Arg | Arg | Pro ₂₅₀ | Asn | Gly | Leu | Gly | Pro ₂₅₅ | Glu |
| Arg | Ser | Ala | Gly ₂₆₀ | Pro | Gly | Gly | Ala | Glu ₂₆₅ | Ala | Glu | Pro | Leu | Pro ₂₇₀ | Thr | Gln |
| Leu | Asn | Gly ₂₇₅ | Ala | Pro | Gly | Glu | Pro ₂₈₀ | Ala | Pro | Ala | Gly | Pro ₂₈₅ | Arg | Asp | Thr |
| Asp | Ala ₂₉₀ | Leu | Asp | Leu | Glu | Glu ₂₉₅ | Ser | Ser | Ser | Ser | Asp ₃₀₀ | His | Ala | Glu | Arg |
| Pro ₃₀₅ | Pro | Gly | Pro | Arg | Arg ₃₁₀ | Pro | Glu | Arg | Gly | Pro ₃₁₅ | Arg | Gly | Lys | Gly | Lys ₃₂₀ |
| Ala | Arg | Ala | Ser | Gln | Val | Lys | Pro | Gly | Asp | Ser | Leu | Pro | Arg | Arg | Gly |

325

330

335

Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
 340 345 350

Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
 355 360 365

Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
 370 375 380

Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
 385 390 395 400

Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Trp Phe Gly Tyr
 405 410 415

Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
 420 425 430

Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
 435 440 445

Ile Val
 450

<210> 4
 <211> 450
 <212> PRT
 <213> Homo sapiens

<400> 4

Met Gly Ser Leu Gln Pro Asp Ala Gly Asn Ala Ser Trp Asn Gly Thr
 1 5 10 15

Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
 20 25 30

Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
 35 40 45

Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
 50 55 60

Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile
 65 70 75 80

Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
 85 90 95

Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
 100 105 110

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Leu | Phe | Cys | Thr | Ser | Ser | Ile | Val | His | Leu | Cys | Ala | Ile | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Asp | Arg | Tyr | Trp | Ser | Ile | Thr | Gln | Ala | Ile | Glu | Tyr | Asn | Leu | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Thr | Pro | Arg | Arg | Ile | Lys | Ala | Ile | Ile | Ile | Thr | Val | Trp | Val | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ser | Ala | Val | Ile | Ser | Phe | Pro | Pro | Leu | Ile | Ser | Ile | Glu | Lys | Lys | Gly |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gly | Gly | Gly | Gly | Pro | Gln | Pro | Ala | Glu | Pro | Arg | Cys | Glu | Ile | Asn | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Lys | Trp | Tyr | Val | Ile | Ser | Ser | Cys | Ile | Gly | Ser | Phe | Phe | Ala | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Cys | Leu | Ile | Met | Ile | Leu | Val | Tyr | Val | Arg | Ile | Tyr | Gln | Ile | Ala | Lys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Arg | Arg | Thr | Arg | Val | Pro | Pro | Ser | Arg | Arg | Gly | Pro | Asp | Ala | Val | Ala |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Pro | Pro | Gly | Gly | Thr | Glu | Arg | Arg | Pro | Lys | Gly | Leu | Gly | Pro | Glu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Arg | Ser | Ala | Gly | Pro | Gly | Gly | Ala | Glu | Ala | Glu | Pro | Leu | Pro | Thr | Gln |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Leu | Asn | Gly | Ala | Pro | Gly | Glu | Pro | Ala | Pro | Ala | Gly | Pro | Arg | Asp | Thr |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Asp | Ala | Leu | Asp | Leu | Glu | Glu | Ser | Ser | Ser | Ser | Asp | His | Ala | Glu | Arg |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Pro | Pro | Gly | Pro | Arg | Arg | Pro | Glu | Arg | Gly | Pro | Arg | Gly | Lys | Gly | Lys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ala | Arg | Ala | Ser | Gln | Val | Lys | Pro | Gly | Asp | Ser | Leu | Pro | Arg | Arg | Gly |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Pro | Gly | Ala | Thr | Gly | Ile | Gly | Thr | Pro | Ala | Ala | Gly | Pro | Gly | Glu | Glu |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Arg | Val | Gly | Ala | Ala | Lys | Ala | Ser | Arg | Trp | Arg | Gly | Arg | Gln | Asn | Arg |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Glu | Lys | Arg | Phe | Thr | Phe | Val | Leu | Ala | Val | Val | Ile | Gly | Val | Phe | Val |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Val | Cys | Trp | Phe | Pro | Phe | Phe | Phe | Thr | Tyr | Thr | Leu | Thr | Ala | Val | Gly |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |

Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
405 410 415

Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
420 425 430

Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
435 440 445

Ile Val
450

<210> 5
<211> 22
<212> DNA
<213> Homo sapiens

<400> 5
tttaccatc ggctctccct ac 22

<210> 6
<211> 23
<212> DNA
<213> Homo sapiens

<400> 6
gagacaccag gaagaggttt tgg 23

<210> 7
<211> 20
<212> DNA
<213> Homo sapiens

<400> 7
tcgtcatcat cgccgtgttc 20

<210> 8
<211> 23
<212> DNA
<213> Homo sapiens

<400> 8
cgtaccactt ctggtcgttg atc 23

<210> 9
<211> 24
<212> DNA
<213> Homo sapiens

<400> 9
gccatcatca tcaccgtgtg ggtc 24

<210> 10
<211> 23
<212> DNA
<213> Homo sapiens

<400> 10
ggctcgctcg ggccttgccct ttg 23

<210> 11
<211> 22
<212> DNA
<213> Homo sapiens

<400> 11
gacctggagg agagctcgtc tt 22

<210> 12
<211> 23
<212> DNA
<213> Homo sapiens

<400> 12
tgaccgggtt caacgagctg ttg 23

<210> 13
<211> 23
<212> DNA
<213> Homo sapiens

<400> 13
gccacgcacg ctcttcaaatt tct 23

<210> 14
<211> 22
<212> DNA
<213> Homo sapiens

<400> 14
ttcccttgta ggagcagcag ac 22

<210> 15
<211> 18
<212> DNA
<213> Homo sapiens

<400> 15
tgtaaaacga cggccagt 18

<210> 16
<211> 18
<212> DNA
<213> Homo sapiens

<400> 16
caggaaacag ctatgacc 18

<210> 17
<211> 15
<212> DNA
<213> Homo sapiens

<400> 17
gcccaacggt ctggg 15

<210> 18
<211> 15
<212> DNA
<213> Homo sapiens

<400> 18
gcccaagggt ctggg

15

<210> 19
<211> 15
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (7)..(7)
<223> n = a, c, g or t

<400> 19
gcccaanggt ctggg

15

<210> 20
<211> 13
<212> PRT
<213> Homo sapiens

<400> 20

Arg Glu Pro Gly Leu Gly Asn Pro Arg Arg Glu Thr Gly
1 5 10

<210> 21
<211> 13
<212> PRT
<213> Homo sapiens

<400> 21

Arg Glu Pro Gly Leu Gly Lys Pro Arg Arg Glu Thr Gly
1 5 10

<210> 22
<211> 13
<212> PRT
<213> Mouse

<400> 22

Arg Glu Pro Gly Leu Gly Asn Pro Arg Arg Asp Ala Gly
1 5 10

<210> 23
<211> 13
<212> PRT
<213> Rat

<400> 23

Arg Glu Pro Gly Val Ala Asn Pro Arg Arg Asp Ala Gly
1 5 10

<210> 24
<211> 13
<212> PRT
<213> Guinea Pig

<400> 24

Arg Glu Leu Gly Leu Gly Asn Pro Arg Arg Glu Ala Gly
1 5 10

<210> 25
<211> 13
<212> PRT
<213> Bos Taurus

<400> 25

Arg Glu Pro Gly Leu Gly Asn Pro Arg Arg Glu Ala Ser
1 5 10

<210> 26
<211> 13
<212> PRT
<213> Pig

<400> 26

Arg Glu Pro Gly Leu Gly Asn Pro Arg Arg Glu Ala Gly
1 5 10